

C823301
Fax I/F Board

User's Manual

Introduction

This EPSON® Fax Interface Board adds standalone plain paper fax reception to your EPSON laser printer. The Fax Interface Board is a G3 facsimile receiver and can be connected to any standard two-wire phone line.

The Fax Interface Board can also serve as a Class 1 Fax modem connected to a computer's serial interface if you use the proper fax software (which is not included in this package).

After you install the board in your printer and connect it to an appropriate telephone line, you can receive faxes any time the printer is turned on and is on line, or while it is printing. The printer cannot receive faxes if it is off line or turned off.

Printers that can use the interface board

The board can be installed in the optional interface slot of these EPSON printers:

EPL™-8000 (for this printer, notice the setting on page 6)
ActionLaser II
ActionLaser 1000
ActionLaser 1500
ActionLaser 1600

Setup

Setting up your fax board is a four-step process:

1. Set the DIP switches on the board.
2. Install the board in your printer.
3. Plug the appropriate cables into the board.
4. Perform a self test.

Before you install your fax board, you need to make a number of choices about how your fax board will work. Read the descriptions below, make your choices, and then proceed with your setup.

Fax reception modes

This board has three fax reception modes:

- Automatic reception-it starts to receive a fax when the ring signal is detected.
- Selective reception-it starts to receive a fax either 15 or 30 seconds after it detects a ring signal (depending on the setting you select).
- Manual reception-you have to use software or press the manual reception button to receive a fax.

Automatic reception

Select this mode if you use the fax board with a telephone line that you use exclusively for fax reception.

If you select Automatic reception mode, the board receives faxes automatically any time fax data is received and the printer is turned on. If you wish, you can connect a telephone to the PHONE connector and place calls when the fax board is not receiving a fax, but you cannot answer any calls.

Selective reception

Use this mode if you want the fax board to share the same line with a telephone.

In this mode the telephone rings for a short time (15 or 30 seconds, depending on your setting) when a call comes in and then the board begins fax reception if you do not answer the telephone. If you answer the phone and it is a fax transmission, you press the manual reception button and transmission begins. If it is a voice call and you do not answer the phone, the caller will hear a fax tone.

You can place telephone calls any time the board is not receiving a fax.

Manual or software reception

Select this mode if you want to connect the fax board to your computer and use fax sending and receiving software or if you use the fax board with a telephone line that you usually use for voice calls.

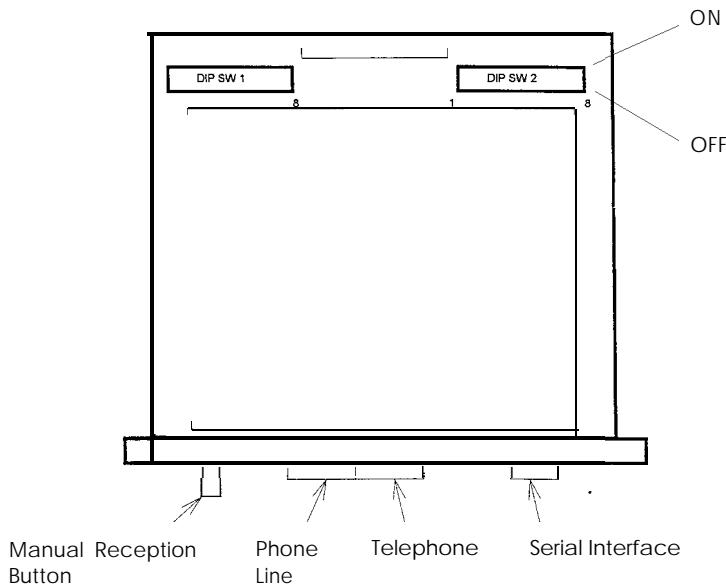
In this mode, you receive a fax using your fax software or in the following manner:

1. Answer the telephone connected to the fax board.
2. Push the manual reception button within 20 seconds after you hear the fax tone signal.
3. Hang up your telephone when the fax tone stops.

You can make a telephone call or answer the phone any time the fax board is not receiving fax data.

Once you have decided which fax reception setting you want, set the DIP switches according to the table below.

This illustration shows the location of the switches; on is up and off is down.



Fax reception settings

SW 1-1	SW 1-2	Functions
OFF	OFF	Automatic reception mode (default)
OFF	ON	Selective reception mode (15 second delay)
ON	OFF	Selective reception mode (30 second delay)
ON	ON	Manual reception mode

There are three other settings you may want to change:

Paper size

The fax board can use either paper size shown below.

SW 1-3	Functions
OFF	Letter (default)
ON	A4

Page overflow settings

If the sending fax machine sends an extra-long page, the fax board can do either of the following:

SW 1-6	Functions
OFF	Print the overflow data to the next sheet (default)
ON	Discard the overflow data

Print data transfer speed

The fax board transfers fax data to the printer very quickly. If the data transfer is too fast for the printer, a SET FULL PRINT error may occur on your printer. If this error happens frequently on your printer, reduce the duty percentage using the following settings. Note that you should always use the 10% setting for the EPL-8000.

SW 2-1	SW 2-2	Functions
OFF	OFF	30% duty (default)
OFF	ON	20% duty
ON	OFF	10% duty (EPL-8000)
ON	ON	5% duty

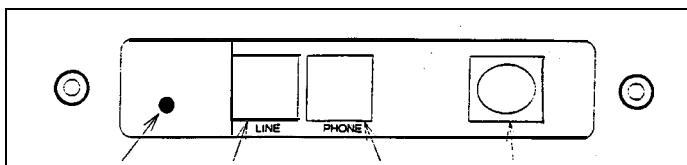
All other DIP switches must be set to OFF, except switches 1-7, 1-8, and 2-8, which must be set to ON.

Installing the fax board in your printer

After you have set the DIP switches, install the fax board in your printer following the instructions in your printer manual. See the section on installing an optional interface board.

Connecting the board

After you have installed the board, connect the phone cable included with the board to the connector labeled LINE on the board. Plug the other end into a standard modular-type telephone connector (jack). If you wish, you can also plug a telephone into the connector labeled PHONE.



Manual Reception to Phone Line to Telephone Serial Interface
Button

Performing a self test

After you have installed the fax board in your printer, perform a self test by following the steps below:

1. While holding down the manual reception button on the fax board, turn on the printer.
2. Release the manual reception button when the printer's FEED indicator starts blinking.

The printer then prints a two-page self test. This shows that the board is properly installed and gives you information about the board and its settings.

Fax modem mode

If you want to use the fax board to send faxes from your computer, you need to buy a straight through serial (or modem) cable and appropriate fax modem software. One cable is included with your fax board, but you need an additional cable to connect the board to your computer.

You need a standard straight through (or modem) cable with a 25-pin connector on one end and a 9-pin connector (for the computer) on the other end or with 25-pin connectors on both ends, depending on the serial port of your computer. Check your computer before you buy the cable. When you have the appropriate serial cable, follow the steps below:

1. Connect the 9-pin connector of the supplied cable to the fax board.
2. Connect the 25-pin connector of the modem cable to the 25-pin connector of the supplied cable.
3. Connect the 9-pin (or 25-pin) connector of the modem cable to your computer.
4. Follow the instructions for your fax modem software to install and use the software.

Where to get help

Epson America provides local customer support and service through a nationwide network of authorized EPSON dealers and Service Centers.

EPSON also provides technical assistance with the installation, configuration, and operation of EPSON products through EPSON Connection. U.S. users can call (800) 922-8911; Canadian users can call (800) GO-EPSON.

Troubleshooting

When the fax board cannot receive a fax

The fax board has a 300KB buffer that allows it to store fax data when it can receive but not print. It can store up to 15 pages depending on the amount of text and graphics on each page. For example, it uses the buffer when it receives a fax while it is printing a standard print job sent by your computer.

The fax board cannot, however, receive a fax under the following conditions:

- o When the buffer is full
- o When the printer is off line
- o When the phone line is already in use
- o When the printer is turned off.

The fax board cannot begin reception if the printer is off line *before* the fax data starts arriving, but it can continue reception if the printer is taken off line after the board begins receiving a fax.

Printer error

The fax board can receive fax data until the data buffer is full under the following conditions:

- 0 Paper out
- o Toner out
- 0 Paper size error
- 0 Paper jam
- 0 Cover open

- o Other errors that can be corrected without turning the printer off.

After these printer errors are corrected, the fax board starts to print the received fax data automatically.

When the fax board stops receiving a fax

The fax board stops receiving fax data in the following situations:

- o Service request error (SERVICE REQ on printer's LCD)
- o Fax reception buffer full
- o Fax sender quits sending the fax
- o Loss of phone line connection
- o Protocol mismatched between the fax board and the other fax machine.

If one of these should occur, all or some part of the received fax data may be lost.

Wrong printer error

The fax board operates in the EPSON printers listed in the Introduction. If it is installed in any other printer, it may not print, it may print garbage, or it may print the following message:

This card cannot be used in the printer. Pull out the card.

TYPE-B INTERFACE CARD
Ver F1.xx / V1.xx A
STATUS CODE xxxxxxxx
SEIKO EPSON CORPORATION

Limitations

EPL - 8000 users

Set the following DIP switches if the fax board is installed in the EPL-8000.

SW 2-1 ON
SW 2-2 OFF

ActionLaser II users

Set the printer emulation mode for the option interface card to the LJ-2 (Laser Jet) mode using SelecType. (See your printer manual for instructions on setting this mode.)

EPSON GL Identity Card (C826022) users

Set the printer emulation mode from the option interface card to a mode other than the HP-GL mode using the control panel. (See your printer manual for instructions on setting the mode.)

PostScript® Card users

Set the printer emulation mode for the option interface card to a mode other than the AUTO (AES; Auto Emulation Switch) mode using the control panel. (See your printer manual for instructions on setting the mode.)

PostScript ID card	(C826051)
EpsonScript Level 2 cartridge	(C832021)
EpsonScript Level 2 board	(C832091)

Error Codes

Error status report

When an error occurs, the fax board prints a Fax Reception Error report, which includes an Error Code number. See the listing below for the meaning of the error code.

Error code listing

Printer error	
100	Printer off-line
101	Paper out
102	Paper jam
103	Toner out
104	Cover open
105	Service Request error
106	Paper size error
Fax board error	
200	Received data buffer full
201	Communication module error
203	Hardware error
Communication line error	
500	Bad line condition
501	Line noise
502	Abort request from the other fax machine
503	Line on hook
504	No response from the other fax machine
Fax protocol errors	
600-603	
Other errors	
900	

Technical specifications

Facsimile reception

Modem	V.29 V.27ter	9600bps, 7200bps 4800bps, 2400bps
Facsimile		T.30 (G3)
Codec		MH, MR
Paper size		A4, Letter (A4 mode on fax communication)
Resolution	Raster Feed	8.00 dot/mm 3.85 dot/mm (Normal) 7.70 dot/mm (Fine)
NCU control		Auto / Manual
RX buffer		300KB
RX pages		15 pages (constant / standard A4 test chart)

Fax modem

Modem	V.29	9600bps, 7200bps
	V.27ter	4800bps, 2400pbs
Modem commands	EIA-578 (Fax class 1 compatible)	
Terminal speed	19200bps	
NCU control	Auto / Manual	
Dial type	Tone/Pulse	

Common specifications

PTT line	Two wires 3.4kHz type
Line impedance	600ohm
Rx signal level	-15 to -35 dBm
TX signal level	-9 to -16 dBm (default -9dBm)
EMI	FCC part 15 class B
PTT	FCC part 68 (USA) IC CS-03 (Canada)

Connectors

LINE (RJ-11: to telephone network)

No.	Signal	I/O	Comments
1	(N.C.)		
2	(N.C.)		
3		I	PTT LINE (-48V / RING)
4		I	PTT LINE (EARTH / TIP)
5	(N.C.)		
6	(N.C.)		

PHONE (RJ-11: to phone)

No.	Signal	I/O	Comments
1	(N.C.)		
2	(N.C.)		
3		0	PTT LINE (-48V / RING)
4		0	PTT LINE (EARTH / TIP)
5	(N.C.)		
6	(N.C.)		

SERIAL (MINI-DIN 9p: RS-232 to HOST PC)

No. (9p)	No. (25p)	Signal	I/O	Comments
1	2	TXD (SD)	I	TRANSMITTED DATA
2	3	RXD (RD)	O	RECEIVED DATA
3	4	RST (RS)	I	REQUEST TO SEND
4	5	CTS (CS)	O	CLEAR TO SEND
5	6	DSR (DR)	O	DATA SET READY
6	7	GND (SG)		SIGNAL GROUND
7	8	DCD (CD)	O	CARRIER DETECT
8	20	DTR (ER)	I	DATA TERMINAL READY
9	22	RI (CI)	O	RING INDICATOR
F.G.	1, F.G.	GND (FG)		FRAME GROUND

I: to the fax board 0: from the fax board

Serial interface cable

PC side	DB-25 connector (DDK 17 JE-13250-02 compatible)
I/F card side	Mini- DIN 9-pin (MSK EC-35-9P-C111 compatible)
Modular cable	RJ-11 compatible
Serial cable	Mini-DIN 9-pin to DB 25-pin